

We claim:

Sub A4

A detonation device for detonating an explosive charge, said device comprising:
a wireless receiver;
microprocessor and control means connected to said wireless receiver;
an explosive bridge wire;
high voltage supply means; and
energy storage and trigger means, whereby a coded wireless signal received by said receiver is decoded by the micro processor and, if the code designates that the respective explosive charge is to be detonated, sends a signal to the trigger means which will supply high voltage to explosive bridge wire which will create sufficient energy to initiate detonation of the respective explosive charge.

Sub A5

2. The detonation device according to claim 1, wherein said coded signal allows selective detonation of a plurality of explosive charges individually.

3. The detonation device according to claim 1, wherein said coded signal allows selective detonation of a plurality of explosive charges in sequence.

4. The detonation device according to claim 1, wherein said coded signal allows selective detonation of a plurality of explosive charges in any desired pattern.

5. The detonation device according to claim 1 wherein the wireless signal does not transmit the power to initiate detonation of the explosive charge thereby reducing the risk of accidental detonation of the explosive charge.

6. The detonation device according to claim 1 wherein said explosive bridge wire comprises:
circuit board having an aperture therein;

an electrical circuit formed on said board with a portion of the circuit overlying said aperture forming a bridge, said bridge having dimensions smaller than the rest of the circuit so that, upon application of power to the circuit, the bridge will flash vaporize causing detonation of the nearby explosive charge.

Sub C1
7. The detonation device according to claim 1 wherein said microprocessor includes digital signal processing logic.

Sub A7 B2
8. A method for detonating an explosive charge, comprising the steps of providing a detonating device having a wireless receiver, microprocessor and control means connected to said wireless receiver, at least one explosive bridge wire, high voltage supply means, and energy storage and trigger means; and

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transmitting a coded wireless signal to said receiver to be decoded by the micro processor and, if the code designates that the respective explosive charge is to be detonated, sends a signal to the trigger means which supplies high voltage to explosive bridge wire causing it to substantially instantly vaporize creating sufficient energy to initiate detonation of the respective explosive charge.

Sub C1
9. The method according to claim 8, wherein said coded signal allows selective detonation of a plurality of explosive charges individually.

10. The method according to claim 8, wherein said coded signal allows selective detonation of a plurality of explosive charges in sequence.

11. The method according to claim 8, wherein said coded signal allows selective detonation of a plurality of explosive charges in any desired pattern.

Sub A7
12. The method according to claim 8 wherein the wireless signal does not transmit the power

to initiate detonation of the explosive charge thereby reducing the risk of accidental detonation of the explosive charge.

13. The method according to claim 8 wherein said explosive bridge wire comprises:

circuit board having an aperture therein;

an electrical circuit formed on said board with a portion of the circuit overlying said aperture forming a bridge, said bridge having dimensions smaller than the rest of the circuit so that, upon application of power to the circuit, the bridge will flash vaporize causing detonation of the nearby explosive charge.

14. The method according to claim 1 wherein said microprocessor includes digital signal processing logic.

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